This graphic shows both currently approved and older systems. It is intended to help identify the various terminals that have been used over the years, and is not intended to identify those terminals that are currently approved.

Common Energy Absorbing Guardrail Terminals

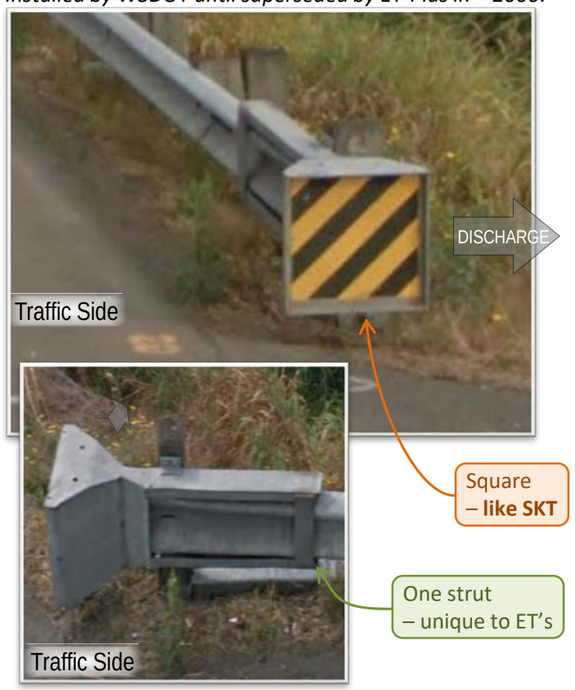
2/15/18

Non-Flared

ET Trinity Highway Products, LLC.

ET-2000

Installed by WSDOT until superseded by ET-Plus in ≈ 2000.

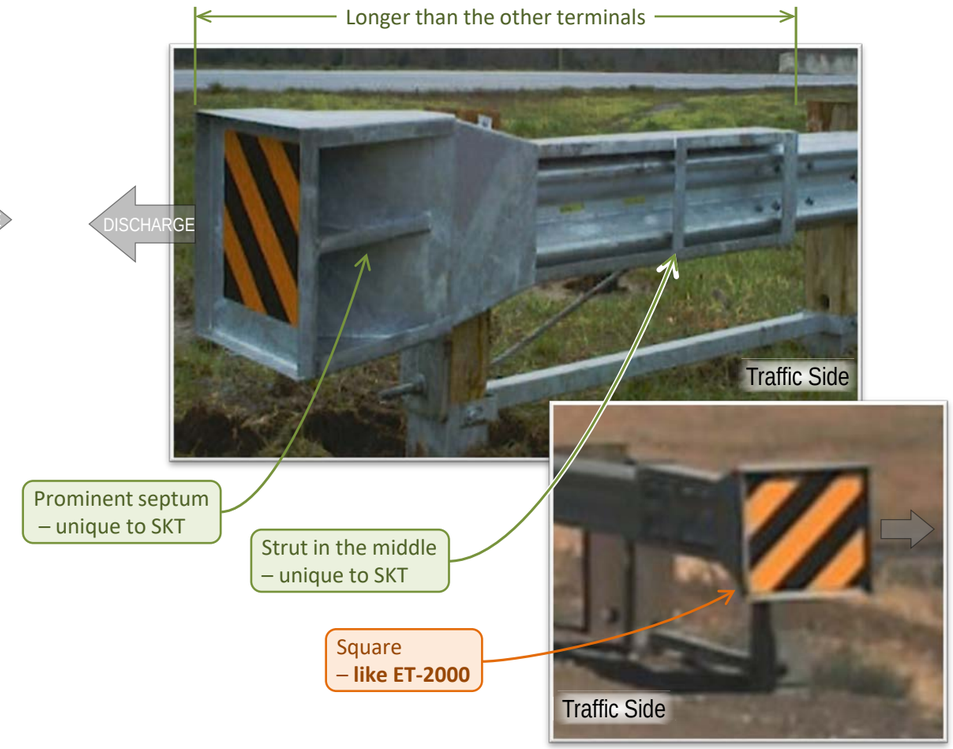


ET-Plus / ET-31

Later generation of ET-2000.

DISCHARGE

SKT Road Systems, Inc.

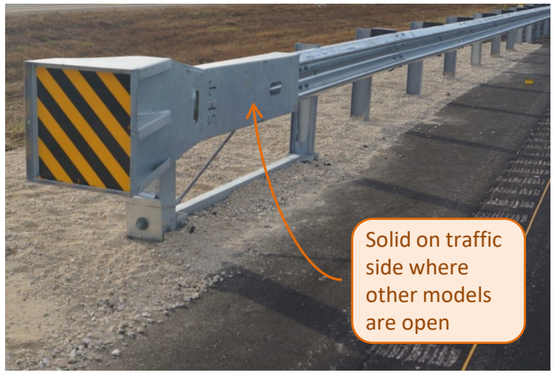


Non-Flared
MASH Compliant

Softstop Trinity Highway Products, LLC.

Image from Trinity Highway Products, LLC website.

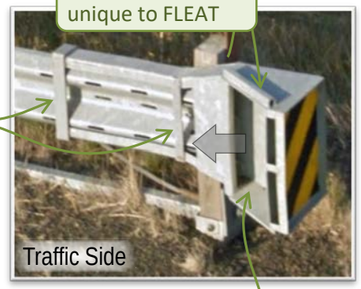
MSKT Road Systems, Inc.



The MSKT is an updated version of the SKT that is MASH compliant

Flared

FLEAT Road Systems, Inc.



Somewhat Rectangular
– **like ET-Plus**
but flanged on all four edges
– **like SKT & ET-2000**

This graphic shows both currently approved and older systems. It is intended to help identify the various terminals that have been used over the years, and is not intended to identify those terminals that are currently approved.

Common Non-Energy Absorbing Guardrail Terminals

2/15/18

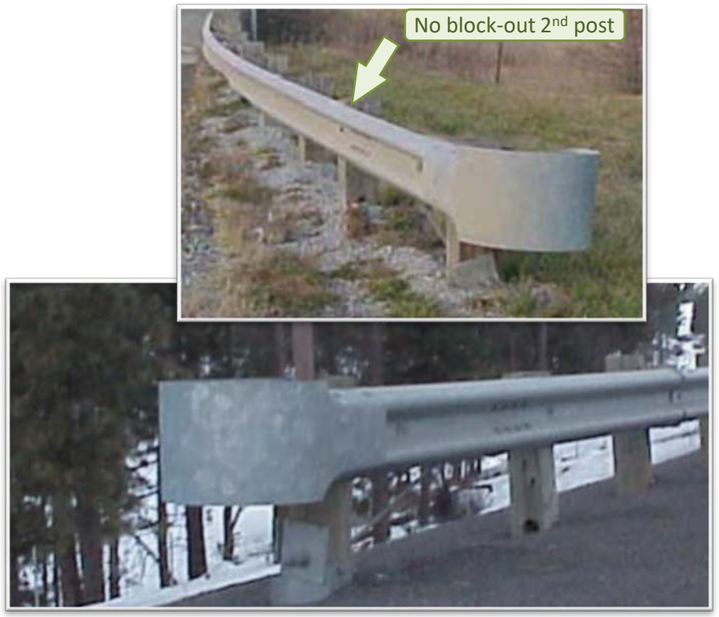
SRT Slotted Rail Terminal Trinity Highway Products, LLC.

FLARED

Buried-In-Backslope (Nonproprietary)

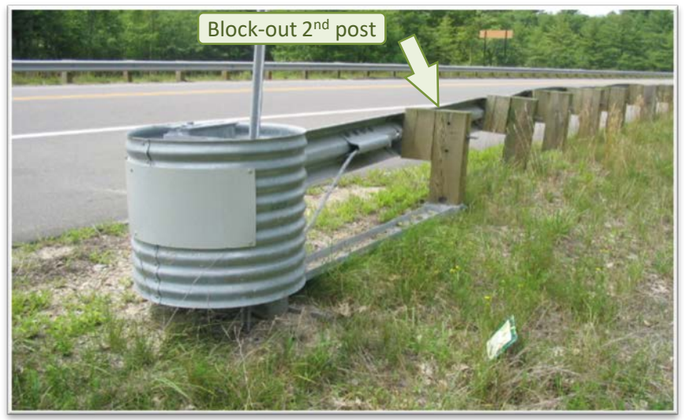
FLARED

BCT Breakaway Cable Terminal



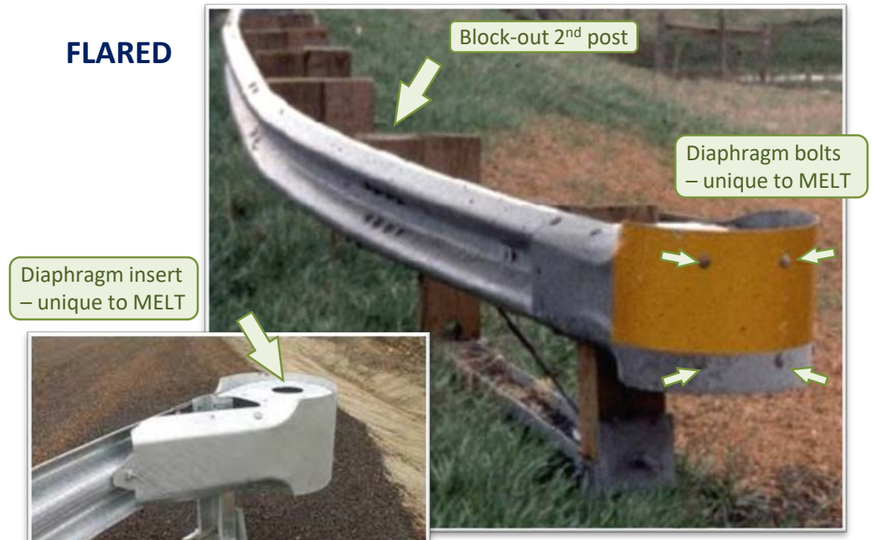
FLARED

ELT Eccentric Loader Terminal (Nonproprietary)



FLARED

MELT Modified Eccentric Loader Terminal (Nonproprietary)



Same design as the ELT except for the nose design. Prior to implementation of NCHRP 350, this was a commonly used end treatment. It was only approved under 350 for TL-2 (speeds 45 mph or less) applications.

SKT (NCHRP 350 Compliant) vs. MSKT (MASH Compliant) - What is the Difference?

2/15/18

These notes are intended primarily for WSDOT Maintenance Staff

The manufacturer has stopped manufacturing the SKT head assembly, and is now only manufacturing the MSKT head assembly. The SKT and MSKT head assemblies are interchangeable. HOWEVER, just putting an MSKT head on an existing SKT terminal assembly does not make it a MASH compliant terminal. There are some other modifications necessary to make the terminal installation MASH compliant.

If you have further questions, see the Manufacturer's installation manual at:
Roadsystems.com

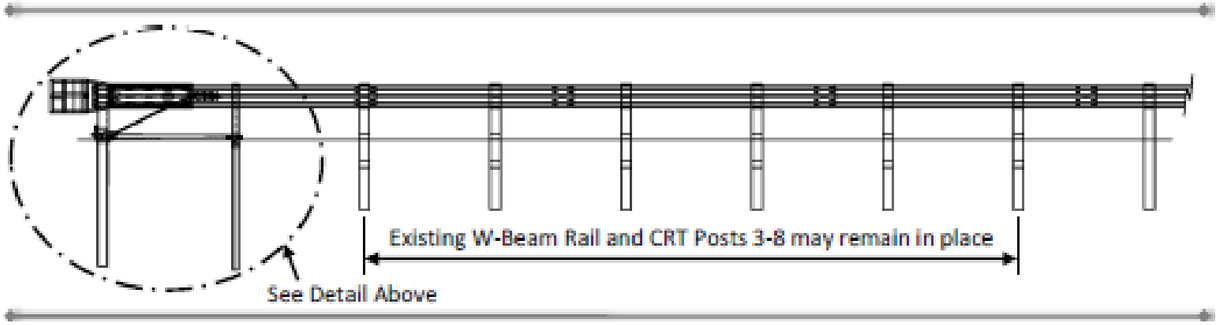
Interchangeability between "Wood Post" MASH MSKT & NCHRP 350 SKT-W-MGS

Wood Post Version

The following components are exactly the same for the **Wood Post MASH MSKT** and the **Wood Post NCHRP 350 SKT-W-MGS:**

- All W-Beam rail sections.
- CRT posts #3 and beyond.
- Cable anchor bracket and shoulder bolts.
- Cable assembly.
- Bearing plate.

- The MASH MSKT Impact Head may be used for new NCHRP 350 terminals or repairs of existing systems (any wood or steel post design option). Note this does not convert the NCHRP 350 SKT to a MASH terminal.
- The existing Wood Posts 1 & 2, Foundation Tubes, and Ground Strut must be replaced with MSKT upper and lower Steel Posts 1 & 2 and the new Ground Strut. See below.



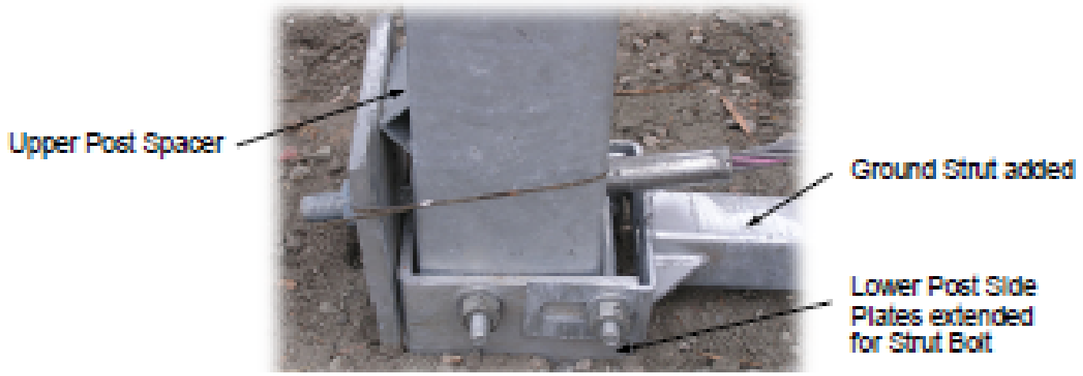
Interchangeability between MASH MSKT and NCHRP 350 SKT-SP

Steel Post Version

The following components are exactly the same for the MASH MSKT and NCHRP 350 SKT-SP:

- All W-Beam rail sections.
- Post #2 upper.
- Posts #3 and beyond.
- Cable anchor bracket and shoulder bolts.
- Cable assembly.
- Bearing plate.
- All hardware, no new hardware for MSKT.

- The MASH MSKT Impact Head may be used for new NCHRP 350 terminals or repairs of existing systems (any steel or wood post design option). Note this does not convert the NCHRP 350 SKT to a MASH terminal.
- The MSKT uses a ground strut and requires another ¾" bolt. See below.
- The MSKT upper post #1 has a spacer angle welded to the post. See below.
- The MSKT lower post #1 has longer side plates for the strut. See below.
- The MSKT lower post #2 is longer, but has been used in other SKT steel post systems.



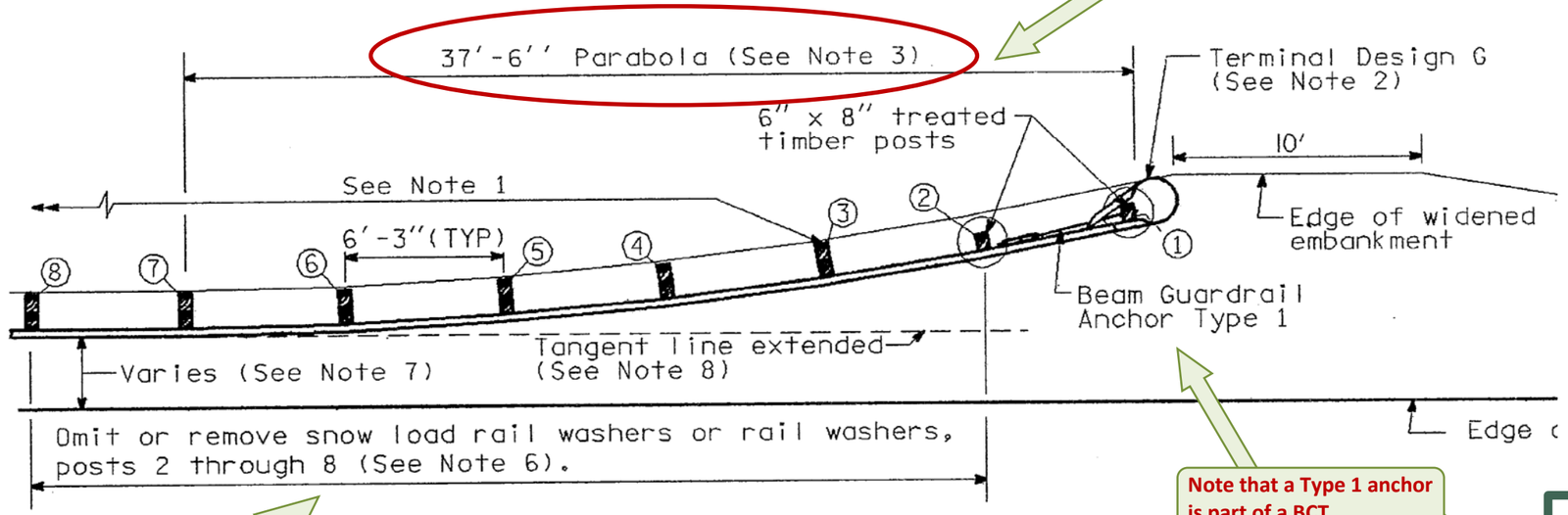
Identifying BCT's – Distinguishing Characteristics

2/26/18

At first glance, a BCT may not look very different from a Type 1 anchor. This is because the BCT INCLUDES a Type 1 anchor. The most distinguishing characteristic of the BCT is the parabolic flare (as shown below)

Parabolic Offset Distances

POST NO.	⑦	⑥	⑤	④	③	②	①
OFFSET DISTANCE	0.00'	0.11'	0.44'	1.00'	1.78'	2.78'	4.00'

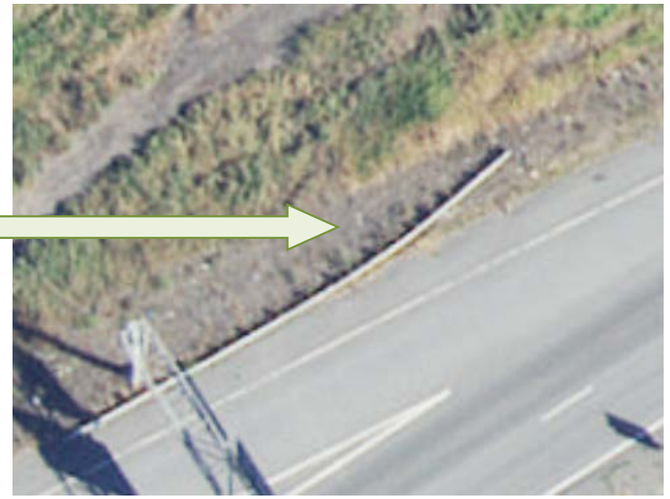


PLAN

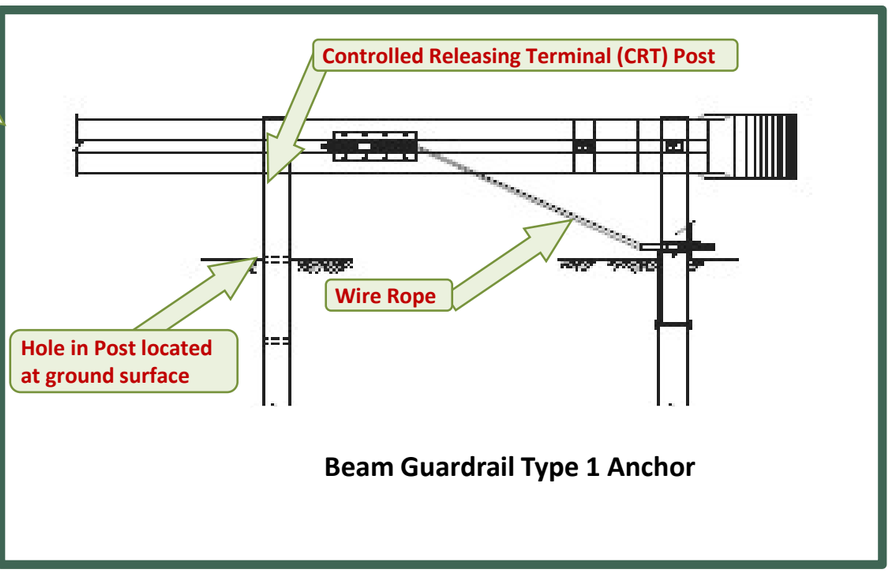
BREAKAWAY CABLE TERMINAL (BCT)

If constructed correctly, a BCT will not have rail washers on posts 2 through 8

Parabolic shape is one key characteristic. However, there was a period of time when BCT's were installed without the parabola.



Note that a Type 1 anchor is part of a BCT



Beam Guardrail Type 1 Anchor